

**Notice of Allowability**

Application No.

10/719,393

Examiner

Nghia M. Doan

Applicant(s)

GALATENKO ET AL.

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed on 11/21/2003 and Telephone Interview on 03/09/2006.
2. ☒ The allowed claim(s) is/are 13-11, and 13-20 (Renumbered 37 CFR 1.126).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 02/02/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20060411
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
VUTHE SIEK  
PRIMARY EXAMINER

### DETAILED ACTION

1. Responsive to communication application 10/719,393 filed on 11/21/2003, claims

1, 3-11 and 13-20

1-20 are pending.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney David D. Brush, Reg. No. 34,557 on March 09, 2006.

The application is amended as the following:

Claims 2 and 12 are canceled.

As per claim 1, line 2, after "circuit layout" deletes "that violates design rules".

As per claim 1, line 7, after "megacells" changes "," to " ,".

As per claim 1, line 7, after "megacells," inserts "wherein the step of inflating the size of megacells comprises, for each megacell of a first type: identifying a distance between an edge on the megacell and each side of the chip, identifying a distance between a center of the megacell and a center of another megacell of the first type, and applying an inflation factor to the sides of the megacell;

As per claim 1, line 9, after "circuit" deletes "to reduce placement complexity".

As per claim 1, line 10, after "placements" deletes "to reduce placement complexity".

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As per claim 3, line 1, after "the process of" changes "claim 2" to "claim 1".

As per claim 4, line 1, after "the process of" changes "claim 2" to "claim 1".

As per claim 11, line 4, after "circuit layout" deletes "that violates design rules".

As per claim 11, line 9, after "megacells" changes "," to " ,".

As per claim 11, line 9, after "megacells," inserts "wherein inflation the size of megacells comprises, for each megacell of a first type: identifying a distance between an edge on the megacell and each side of the chip, identifying a distance between a center of the megacell and a center of another megacell of the first type, and applying an inflation factor to the sides of the megacell;

As per claim 11, line 12, after "circuit" deletes "to reduce placement complexity".

As per claim 11, line 14, after "placements" deletes "to reduce placement complexity".

As per claim 13, line 1, after "the computer usable medium of" changes "claim 12" to "claim 11".

As per claim 14, line 1, after "the computer usable medium of" changes "claim 12" to "claim 11".

***Allowable Subject Matter***

3. Claims 1, 3-11, and 13-120 are allowed.

4. The following is an examiner's statement of reasons for allowance: taking claim 1 as exemplary, the prior art made of record does not teach or fairly suggest a process of positioning megacells that including in an initial integrated circuit layout, the circuit layout have sides defining sides of a chip, the process comprising steps of: comprising

the inventive steps of: inflating a size of at least some megacells, wherein the step of inflating the size of megacells comprises, for each megacell of a first type: identifying a distance between an edge on the megacell and each side of the chip, identifying a distance between a center of the megacell and a center of another megacell of the first type, and applying an inflation factor to the sides of the megacell; placing the megacells in a footprint of the circuit; and permuting megacell placements.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Scepanovic et al. (US 5,808,899) is the closed prior art of the invention, Scepanovic et al. disclose a system for optimizing placement of a plurality of cells (megacells) which is increasing a cell size by a fixed amount, which is one unit plus a first and a second of predetermined percentage of the remaining available space of the surface; placing the cell in a footprint; and permuting cell placement, but Scepanovic et al. do not teach or fairly suggest the inflation factor, which is not a fixed amount. The inflation sizing of megacells by identifying a distance between an edge on the megacell and each side of the chip, identifying a distance between a center of the megacell and a center of another megacell of the first type, and applying an inflation factor to the sides of the megacell.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghia M. Doan whose telephone number is 571-272-5973. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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